A Whole New Mind
Why Right Brainers Will Rule the Future
by Daniel H. Pink

A doctor, lawyer or accountant. To this day, that's still what most well-meaning parents encourage their kids to be when they grow up. But are they right?

Not according to Daniel H. Pink. Pink is a leading thinker on issues of business and technology whose articles have appeared in countless publications, including the New York Times, Fast Company, and Wired (where he is a contributing editor). A former speechwriter for Vice-President Al Gore, Pink is also the author of two bestselling books including Free Agent Nation, and more recently, A Whole New Mind: Why Right Brainers Will Rule the Future (a book that uses our two-sided human brain as a metaphor for the coming "Conceptual Age" of American business).

In A Whole New Mind, Pink argues the future belongs to a different kind of person, with a different kind of mind. He says we're on the cusp of a new era that will favor "conceptual" thinkers like artists, inventors and storytellers. In his view, these "right-brained" individuals will be our next business elite; the men and women who will power America to even greater heights. Meanwhile, those individuals and companies that continue to cling to outmoded forms of thinking will see their work devalued.

Right Brain Rising

James Watson, Nobel Prize recipient for helping to discover DNA, describes the human brain as "the most complex thing we have yet discovered in the universe."

This is because a typical brain consists of some 100 billion cells, each of which connects and communicates with up to 10,000 adjacent cells. Together, they forge an elaborate and dynamic network of some one quadrillion (1,000,000,000,000,000) connections that guide everything we do, including how we talk, breathe, and think.

Yet for all the brain's complexity, its essential geography is quite simple. Scientists have long known that the brain is divided into two hemispheres. But until very recently, the scientific establishment did not consider the two halves to be equal. For centuries, physicians believed that the left side of the brain — that side that is responsible for logic and reason — was the crucial half; the half that made us human. The right side — the side that governs our instincts and emotions — was considered subsidiary. Some even believed the right side of the brain was simply left over from an earlier stage of development, and argued it would begin to shrink over time.

While the scientific community now knows and accepts both sides of the brain as
equal partners, it's still the case that some people, organizations and cultures appear to favor one side of their brain — or at least one way of thinking — over the other. Pink observes that many people seem more comfortable with logical, sequential-type thinking. Not surprisingly, these people tend to become lawyers, accountants and engineers. On the other hand, some people are more attracted to holistic, intuitive and non-linear thinking. They tend to become inventors, entertainers and writers.

Of course, we need both types of approaches in order to build a productive, fun and just society. Nevertheless, American culture still tends to prize the left-leaning thinking more highly, seeing right-brained activities as useful, but clearly secondary.

In fact, for the past 50 years or so, American national achievement has depended predominantly on the use of left-brained skills. During the "Information Age" (as Pink labels the latter half of the 20th century), America placed a great deal of emphasis and energy on creating a veritable army of "knowledge workers." American colleges began cranking out new computer programmers, MBAs and engineers at a near frantic pace. And all of these new graduates owed their success in school (or lack thereof) to their ability to grasp logical, linear, analytical reasoning — skills associated with the left side of the brain, as demonstrated by their success (or lack thereof) on standardized tests.

But according to Pink, in the dawning Conceptual Age, having highly sophisticated left-brain-type skills is no longer the guaranteed meal ticket it used to be.

"Left-brain-style thinking used to be the driver, and right-brain-style the passenger," writes Pink. "But now, right-brainers are suddenly grabbing the wheel, stepping on the gas and deciding where we're going ... Left-brain thinking is still necessary, but it's no longer sufficient. Instead, the right-brained aptitudes so often disdained and dismissed for so long will increasingly determine who soars and who stumbles."

**Part I: Abundance, Asia and Automation**

Why is this change happening? And why so quickly? Pink points to three change agents — Abundance, Asia and Automation. The first part of his book is spent exploring how these three forces are having a profound impact on our society.

First, let's look at the impact Abundance has had on us in the West.

As the Information Age began to gather steam, our investment in left-brained thinking made us materially richer than we'd ever dreamed possible, offering up a standard of living in much of the developed world that would have been unthinkable even 100 years ago. If you have any doubt that Americans are living in an age of unparalleled abundance, just look at a 20-mile radius around your house and consider how many shopping malls and super-stores there are (carrying everything from pineapples to computers to pet supplies), versus that
same area fifty years ago.

Pink cites another example of our modern day affluence: During the early years of the twentieth century, the American dream was simply to own a home and a car. Today, more than two-thirds of Americans own their homes. (In fact, thirteen percent of homes purchased today are second homes!) And as for cars, the U.S. now has more cars than licensed drivers, so on average, every American has at least one.

Here’s an even crazier statistic: The United States currently spends more on trash bags than ninety other countries spend on everything. In other words, the mere plastic receptacles of our consumer waste cost more than all of the goods consumed by nearly half of the world's nations. While it is true that some segments of our society are still going without, most of us have way more stuff than we'll ever need.

And yet, according to Pink it is exactly this seemingly boundless prosperity — earned by left-brained skills — that makes it more necessary than ever for individual and businesses to now shift their emphasis over to the right side of the brain. In an age of affluence and abundance, it is no longer sufficient for a business to make a product that is merely functional and reasonably priced. With so many commodities to choose from, the “aesthetic imperative” (as author Virginia Postrell called it), starts to loom large. Today's consumer is craving products that are not only well made and well priced, but also beautiful, environmentally friendly, and meaningful.

Incorporation of “soft” right-brained aptitudes — such as design, empathy and fun — is absolutely crucial for a product or service to stand out in a crowded marketplace.

Automation is the second unstoppable force that's propelling us into the new Conceptual Age. As a metaphor for the impact of automation on our society, Pink recalls the story of chess grand master, Garry Kasparov, who pitted himself against an IBM-designed super computer named Big Blue in 1985. Kasparov won that particular contest and, over the next decade, IBM programmers continued to improve the machine, but Kasparov never lost a re-match.

But eventually the pendulum began to swing. In 1997, Kasparov was finally defeated by a new 1.4-ton IBM super-computer. Shocked and humiliated, Kasparov immediately pressed for a rematch. Again, he lost. Eventually, the grand master came to realize that, while he himself was able to look at a chess board and analyze one to three moves in a matter of moments, his mechanized opponent was able to evaluate between two and three million moves per second. Game, set, and match.

Daniel Pink is by no means the first to comment on the unbridled power of automation. Management guru, Tom Peters, believes that with the widespread availability of relatively affordable super computers, any American job that depends on routines steps — or can be broken down into a set of repeatable
steps — is at risk.

Like it or not, a human being will never beat a computer at its own game. But, says Pink, that doesn't mean we can't change the rules. They haven't built a computer yet (and perhaps never will) that's capable of imagination, empathy and creativity.

The third and final factor that's creating an urgent need for more right-brained thinking in American businesses and public sector organizations is globalization (and in particular, the rise of Asia). "Few issues have generated more controversy and anxiety in the workplace than outsourcing," explains Pink. "The job of a computer programmer earning $70,000 per year in the United States can be performed in India for less than $14,000. And there's no shortage of highly qualified Indians to fill those jobs. India's universities are cranking out over 350,000 engineering graduates each year." And that's just India. The numbers for China are even more frightening.

For white-collar, left-brain heavy information workers in Europe and North America, the implications of this outsourcing trend are alarming. Pink points to a recent study by Forrester Research that predicts, "at least 3.3 million white-collar jobs and $136 billion in wages will shift from the U.S. to low-cost Asian countries by 2015."

What can we do to stay ahead of this curve? The second half of A Whole New Mind encourages us to focus on developing our right-brained thinking skills, and in particular "six senses" which cannot be easily copied by automation, handed over to low-wage labourers in Asia, and which are fundamentally necessary in order to appeal to customers faced with an abundance of choices in today's marketplace.

**Part II: The Six Senses**

In the new Conceptual Age, left-brained thinking skills such as logic and reason will still be important. But they will no longer be sufficient. Pink argues we need to supplement our already well-developed left-brained skills by getting in touch with six critical senses, namely: Design, Story, Symphony, Empathy, Play, and Meaning.

1. **Design**

   For many traditional American businesses, product design is an afterthought. It's like the icing on a cake. It's nice to have good design, but it's not mission-critical. Pink says this is changing. Fast. "It is easy to dismiss design — to relegate it to mere ornament, the 'prettifying' of places and objects to disguise their banality," he writes. "But that is a serious misunderstanding of what design is and why it matters."

   If like too many American business leaders today, you're not entirely convinced that design matters, then think about your toaster for a moment. If you're like most
people, you use your toaster for maybe ten minutes a day. The remaining 1,430 minutes of the day your toaster is simply on display. In other words, less than one percent of the toaster's time is devoted to utility, while 99% is devoted to significance. If you look at it that way, why shouldn't your toaster be beautiful?!

For American business leaders, finally coming to grips with the fact that design really matters means letting go of a lot of silly cultural prejudices. Pink loves to tell the story of the late Gordon Mackenzie, a former creative director at Hallmark Cards. Mackenzie often spoke to groups of school children, and always started his speech with the question: "How many artists are there in the room?"

Invariably, in kindergarten and first grade classes, virtually every child would enthusiastically wave his or her hand in the air. But by later grades, only a few children would admit to being an artist. As children got older and began to doubt whether being an artist was a noble profession, students would begin to shy away. Pink sees this as a cautionary tale. The very future of our society, he asserts, now depends on "having artists in the room." While not everyone will be the next Michelangelo, for Pink, it is absolutely essential that we at least begin to truly think of artistry as a noble calling.

2. Story

Cold hard facts. These were the currency of the Information Age. "Information is power," people used to say. But this is less and less the case today.

Nowadays, just about every fact you could ever want to know is instantly available online. Information is a commodity whose value is dropping literally by the hour. In the emerging Conceptual Age, what matters more and more, according to Pink, is "the ability to place facts into context and to deliver them with emotional impact." Or, in more basic terms, what will matter most going forward is your ability to tell stories.

If the burgeoning discipline of cognitive neuroscience has taught us one thing, it's that human beings are hardwired to love stories. We're all natural born storytellers, says Pink. Think about it: as a small child, you probably looked forward to "show and tell" in school. And at lunchtime, you likely gathered with your friends and told stories about the things that really mattered. But as you aged, somewhere along the line, the concept of Story gradually became synonymous with "fiction." And by the time you started your career, you'd come to understand that storytelling was "something serious people do not engage in." For Pink, nothing could be further from the truth.

As information becomes more freely available through the Internet and other communications technologies, facts become less valuable. Instead, it is the context in which these facts are placed, as well as the delivery of the facts with emotional impact that truly matters. This is the essence of storytelling.

"Story means big money," says Pink. He estimates that the art of persuasion — advertising, consulting, and public relations — accounts for twenty-five percent of U.S. gross domestic product. In other words, Story is worth about $1 trillion a
year.

Slowly but surely, business people are beginning to realize that people often learn as much from water cooler conversations as they do in formal training sessions. With this in mind, leading American companies, such as 3M, are now giving their top executives storytelling lessons. NASA has also begun using storytelling in its knowledge-management initiatives. But there's still a long way to go, says Pink. And until American business truly embraces storytelling as a legitimate enterprise, we will be squandering a vital competitive advantage moving into the Conceptual Age.

3. Symphony

If you hoped to thrive in the Twentieth Century, you needed to specialize. This meant finding a narrow niche and focusing relentlessly on adding value. But in the dawning Conceptual Age, the opposite is true. One's ability to take seemingly unrelated pieces and knit them together to form a "big picture" is now the crucial skill.

Big picture thinking is the great differentiator of our times. Pink calls this Symphony.

"Symphony," writes Pink, "is the capacity to synthesize rather than to analyze; to see relationships between seemingly unrelated fields; to detect broad patterns rather than to deliver specific answers; and to invent something new by combining elements nobody else thought to pair." In other words, Symphony is a perfect marriage of left and right-brained thinking. It's about taking advantage of our whole mind — our powers of logic, analysis and intuition — to make sense of the world, and determine what truly matters. Just as important, it's about letting go of the rest.

The twin forces of Abundance, Asia and Automation mean there will be more demand for Symphony than ever before. As just one example, the off-shoring of computer jobs to India is creating new opportunities for people who are able to "conduct" the relationships between the programmers in the East and the clients in the West. This new breed of managers will need to be comfortable with cultural differences, have the "hard" (i.e. left-brained) skills necessary to understand the technological tasks at hand, as well as a mastery of "soft" people skills.

Nicholas Negroponte of MIT put it this way, "Many engineering deadlocks have been broken by people who are not engineers at all. That is because perspective is more important than IQ. The ability to make big leaps of thought is a common denominator among the originators of breakthrough ideas, multidisciplinary minds, and a broad spectrum of experiences." Or, as Pink would say, that's Symphony in action.

4. Empathy
Empathy is right-brained thinking in action. It's about imagining yourself in the position of others, and to intuiting what that other person is feeling. It involves picking up subtle, non-verbal clues such as facial expressions and posture.

In the Information Age, empathy was widely considered to be a soft-hearted, "touchy-feely" concept that had no place in the boardrooms of the nation. However, Daniel Goleman's breakthrough bestseller Emotional Intelligence (published a little over ten years ago), signalled the beginning of a shift away from a long-held belief that intellectual abilities outweighed emotional strengths in the business world.

We learned through the story of Garry Kasparov that just about any job that can be reduced to a fixed pattern can be reproduced by computers (or sent to an overseas workforce), while the capacity for picking up on subtle signals and forming connections on an emotional level can never be automated. Empathy is what sets humans apart.

5. Play

In the dawning Conceptual Age, Pink believes work will become more and more playful. He invites us to consider how far we've come in just a little over a century:

As recently as the 1940's, at plants owned by the Ford Motor Company, laughter was considered a disciplinary offence, and whistling was considered an act of insubordination. Fortunately, this is no longer the case. But to this day, many American organizations still frown upon employees who seem to be having too much fun at work. Fair enough; work is supposed to be serious business. Or is it?

Not if you ask your doctor. There is a growing consensus in the medical community that laughter can improve a person's immune systems and overall health. And a handful of highly innovative organizations are starting to see the connection between employee health and overall profitability. Combining work and play has become a killer strategy for these organizations. Southwest Airlines, which continues to turn a profit while many of its competitors struggle to remain solvent, says the following in its mission statement: "People rarely succeed at anything unless they are having fun doing it." Southwest knows that happy employees are also productive employees.

Across America, it would seem that "Play" is finally coming out of the closet.

6. Meaning

Living as we do in an age of unparalleled abundance — a time in which a simple trip to the local shopping mall can cause sensory overload — we finally have time to search for meaning in our lives. Many societies in the world do not have this luxury.

Pink explains that finding meaning (what some might call spirituality) in the world
around us has been scientifically shown to improve nearly every aspect of human life. People who pray or meditate daily have been shown to have lower blood pressure. People who attend church regularly have less risk of dying from heart disease and some cancers. This is also true of people who share deep environmental values.

Slowly but surely, spirituality is finding its way into the workplace. In companies across America, people are hungering to express their spirituality at work. Some executives try to suppress this basic human need for fear of offending their religiously diverse employees. But Pink points to studies that prove that companies that embrace their employees spiritual values tend to outperform those that do not.

In the dawning Conceptual Age, Pink foresees a rise in spirituality in the workplace, as well as an increased market for businesses that serve a growing population of materially affluent Westerners searching for meaning in their lives.

**Conclusion**

So, Daniel Pink comes to us with a mix of good news and bad news. The bad news is people who make a living based on outdated linear, left-brained thinking skills (e.g. traditional computer programmers, engineers, or accountants) may soon find their jobs in jeopardy, if they haven't already. But the good news is, anyone can develop and master the right-brained traits upon which both personal and professional success will depend in the dawning Conceptual Age. We just have to try.

The relatively small number of artists, designers and counsellors already living among us are no doubt welcoming the Conceptual Age with open arms. But for a great many people, Pink recognizes that his vision of the future may seem dreadful. Those of us who make our livings as left-brain thinking lawyers, accountants and engineers may struggle a bit more to adapt to the coming change. But fear not, he says. The right-brained, soft touch abilities he writes about are fundamentally human attributes, which are sure to come back to us with practice. After a few generations of the Information Age, our right-brained muscles may have atrophied, but they're not gone. Anyone can master the six Conceptual Age senses, he says. But those who master them first will surely have a huge competitive advantage.